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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/670,949

09/25/2003

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01/09/2008

EXAMINER

LUONG, ALAN H

ART UNIT

PAPER NUMBER

4126

MAIL DATE

DELIVERY MODE

01/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/670,949	Applicant(s) LIANG, KAI-CHIEH	
	Examiner ALAN LUONG	Art Unit 4126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 sept, 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/05/2007, 09/25/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the initial Office Action based on the 10/670949 application filed on Sept 29, 2003. Claims 1-50, as originally filed, are currently pending and have been considered below.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: “312” and “314” reference in page 12 line 26 and page 13 line 1 respectively in specification but not in shown in FIG. 4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

3. At line 17 of page 6 recites "indicator" which appear to be a misspelling of the word "identifier".
4. At line 20 of page 6; recites "uniform reference" which appear to be a misspelling of the word "universal resource" Appropriate correction is required.

Claim Objections

5. Claims 1,3-6, 9, 11, 15, 17-19, 23-29, 34-36, 38-40, 42-43 and 48-49 are objected to because of the following informalities:

In claims 1, 3, 4, 5, 9, 11, 15, 17-19, 23-29, 34-36, 38-40, 42-43, 48-50 abbreviation "MPEG-2" should be replaced by "Moving Picture Coding Expert Group 2 (MPEG-2)" and abbreviation "TS" should be replaced by "Transport Stream (TS)" and abbreviation "MPEG-4" should be replaced by "Moving Picture Coding Expert Group 4 (MPEG-4)"

In claim 6, abbreviation "BIFS" should be replaced by "Binary Format For Scenes (BIFS)" .

6. Claims 1, 15, 26 and 40 are objected to because of the following informalities: At line 1 and 2 of the claims recites "indictor" respectively, which appear to be a misspelling of the word "identifier" Appropriate correction is required.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims

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are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims **1, 2, 5-11, 13-16, 19-27, 30-33, 35-36, 39-41 and 44-49** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1-6, 9-11, 13, 12, 15-16, 17-20, 23-25, 27-32, 36-38, 41-46 and 49-50** respectively of copending Application No. 10/680694.

For example:

10/670949 (Application)	10/680694(Copending Patent)
Claim 1: A uniform resource indicator (URI) pointer method for the retrieving MPEG-4 data pointers in an MPEG-2 transport stream (TS), the method comprising: receiving an MPEG-2 TS; locating a URI in the TS; in response to the URI, accessing an address; in response to accessing the address, retrieving MPEG-4 resources; and decoding the MPEG-4 resources.	Claim 1: A uniform resource identifier (URI) pointer method for the referencing of MPEG-4 data resources carried in an American advanced television systems committee (ATSC) MPEG-2 transport stream file system (TSFS), the method comprising: receiving an MPEG-2 TS, with a packetized ATSC TSFS; locating a URI in the TS; in response to the URI, accessing an address; in response to accessing the address, retrieving MPEG-4 resources from the ATSC TSFS; and, decoding the MPEG-4 resources.

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<p>Claim 2: The method of claim 1 wherein locating a URI in the TS includes locating a URI selected from the group including a local cache address, a Web protocol identifier, and a local identifier (lid).</p> <p>Claim 5: The method of claim 4 wherein receiving an MPEG-2 TS with MPEG-4 resources organized in OC system includes using an OC transport protocol; wherein using lid URIs to provide a binding name and access scheme to the objects in the OC.</p> <p>Claim 6: The method of claim 5 wherein using lid URIs to provide a binding name and access scheme to the objects in the OC includes using a lid URI embedded in an Initial Object Descriptor (IOD) to locate resources in the OC selected from the group including a BIFS scene description stream and an object descriptor stream.</p> <p>Claim 7 is analogous to Claim 4 is analogous to Claim 9 is analogous to Claim 10 is analogous to Claim 11 is analogous to Claim 14 is analogous to Claim 13 is analogous to Claim 15 is analogous to Claim 16 is analogous to Claim 19 is analogous to Claim 20 is analogous to Claim 21 is analogous to Claim 22 is analogous to Claim 23 is analogous to Claim 24 is analogous to Claim 25 is analogous to</p>	<p>Claim 2. The method of claim 1 wherein accessing an address in response to the URI includes accessing an address selected from the group including a local identifier (lid) and an http address.</p> <p>Claim 3: The method of claim 2 wherein accessing an address includes accessing a lid URI providing a binding name and access scheme to the objects in the ATSC TSFS.</p> <p>Claim 4. The method of claim 3 wherein using lid URIs to provide a binding name and access scheme to the objects in the ATSC TSFS includes using a lid URI embedded in an Initial Object Descriptor (IOD) to locate resources in the TSFS selected from the group including a BIFS scene description stream and an object descriptor stream.</p> <p>Claim 5 Claim 6 Claim 9 Claim 10 Claim 11 Claim 12 Claim 13 Claim 15 Claim 16 Claim 17 Claim 18 Claim 19 Claim 20 Claim 23 Claim 24 Claim 25</p>
<p>26. In a receiver for decoding MPEG-4 data, a uniform resource indicator (URI) pointer system for accessing pointers to MPEG-4 data from an MPEG-2 transport stream (TS), the system comprising:</p> <p>a receiver having an interface for accepting an MPEG-2 TS with an embedded URI for accessing MPEG-4 resources;</p>	<p>27. A uniform resource identifier (URI) pointer system for accessing MPEG-4 data from an American Advanced Television Systems Committee (ATSC) MPEG-2 transport stream file system (TSFS), the system comprising:</p> <p>a receiver having an interface for accepting an MPEG-2 TS with an embedded URI and a packetized ATSC</p>

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<p>an address access unit having an interface to accept the MPEG-2 TS from the receiver, the address access unit locating a URI in the TS, accessing an address, and retrieving MPEG-4 resources; and,</p> <p>a decoder having an interface connected to the address access unit for receiving the MPEG-4 resources and supplying decoded the MPEG-4 information.</p> <p>Claim 27 is analogous to Claim 30 is analogous to Claim 31 is analogous to Claim 32 is analogous to Claim 33 is analogous to Claim 35 is analogous to Claim 36 is analogous to Claim 39 is analogous to Claim 40 is analogous to Claim 41 is analogous to Claim 44 is analogous to</p> <p>Claim 45 is analogous to Claim 46 is analogous to Claim 47 is analogous to Claim 48 is analogous to Claim 49 is analogous to</p>	<p>embedded URI and a packetized ATSC TSFS;</p> <p>an address access unit having an interface to accept the MPEG-2 TS from the receiver, the address access unit locating a URI in the TS, accessing an address, and retrieving MPEG-4 resources from the ATSC TSFS; and,</p> <p>a decoder having an interface connected to the address access unit for receiving the MPEG-4 resources and an interface for supplying decoded MPEG-4 information.</p> <p>Claim 28 Claim 29 Claim 30 Claim 31 Claim 32 Claim 36 Claim 37 Claim 38 Claim 41 Claim 42 Claim 43</p> <p>Claim 44 Claim 45 Claim 46 Claim 49 Claim 50</p>
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Although the conflicting claims are not identical, they are not patentably distinct from each other because some claims of the Co-pending Application No. 10/680,694 encompass the scope of claims above of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims **1-3, 9, 10-11, 14, 26-28, and 34-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (Hereafter, APA), Specification of the current application (10/670,949); in view of Carsten Herpel (hereafter, Herpel), “Elementary Stream Management in MPEG-4” published in IEEE, March 1999.

Regarding to claim 1: APA teaches a uniform resource identifier (URI) pointer method for the referencing of Moving Picture Coding Expert Group 4 (MPEG-4) data pointers in an Moving Picture Coding Expert Group 2 (MPEG-2) transport stream (TS)[ISO/IEC has specified the method for carriage of MPEG-4 content on MPEG-2 transport stream (known as 4on2) in the specification of ISO/IEC 13818-1; [see APA, page 1 line 12 to page 2 line 10), the method comprising receiving an MPEG-2 TS (Elements of ISO/IEC 14496 content may be conveyed in one or more ISO/IEC 13818-1 MPEG-2 program elements referenced by a unique PID value within a Transport Stream. See Fig. 1 and page 2 line 11 to page 3 line 21) ; locating a URI in the Transport Stream (The Binary Format For Scenes BIFS ES_Descriptor contains the

ES_ID and an optional Universal Resource Locator (URL) for the BIFS stream to retrieve. Accordingly, there are two ways to retrieve the Binary Format For Scenes (BIFS) streams, see page 5 lines 1-16) and Table-1 of page 4); in response to the URI, accessing an address (Alternatively, if the Elementary Stream (ES)_Descriptor contains an URL, the BIFS stream can be retrieved from the location specified by the URL. The retrieved stream is then associated with the ES_ID. See page 5, line 13 to page 6 line 2). However, APA fails to teach retrieving MPEG-4 resources in response to accessing the address; and decoding the MPEG-4 resources.

However, Herpel, in the same Moving Picture Coding Expert Group 4 (MPEG-4) stream management field, discloses retrieving MPEG-4 resources in response to accessing the address and decoding the MPEG-4 resources (see FIGs. 6-8 and Section III_A The System Decoder Model, page 319 to 323 line 9, Section V Accessing MPEG-4 Content, page 323 to 324 line 22). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the MPEG-4 system decoder model as taught by Herpel in the teaching of APA; in order to develop the transport encapsulation MPEG-4 streams in the MPEG-2 Transport Stream in real-time digital broadcast.

Regarding to claim 2: The method of APA and Herpel in claim 1 above, Herpel further teaches the locating a URI in the Transport Stream (TS) includes locating a URI selected from the group including a local cache address, a local identifier (lid) (a URL pointer, see Herpel , section II-A: OD components, page 316-317 line 11, and section

II-D page 318, FIGs. 3-4) and a Web protocol identifier (a HTTP or Internet protocol)(see Herpel, Section IV-D and V; page 322-324 line 22)

Regarding to claim 3 and 9: In the method of claim 2 above, APA and Herpel teach wherein receiving an MPEG-2 TS includes

receiving an Moving Picture Coding Expert Group 2 (MPEG-2) TS embedded with Moving Picture Coding Expert Group 4 (MPEG-4) resources; wherein locating a URI includes using lid URIs retrieved from the MPEG-2 TS ; (a URL pointer, see Herpel , section II-A: OD components, page 316-317 line 11 and FIGs. 3,4 and section IV: Transport of ES page 320- 322, FIGs 7,8) and,

wherein retrieving MPEG-4 resources in response to accessing the lid URIs includes retrieving MPEG-4 resources from the MPEG-2 TS (see Herpel, Section V; page 322-324 line 22).

Regarding to claim 10: APA and Herpel teach the retrieving MPEG-4 resources in response to accessing the address as claim 1 above; APA also teach Moving Picture Coding Expert Group 4 (MPEG-4) resources selected from the group including audio, video, and systems data. (MPEG-4 contents consist of an initial object descriptor and a variable number of streams, such as object descriptor stream, scene description streams, audio streams, video streams, IPMP streams, etc. See APA, page 2 lines 13-16).

Regarding to claim 11: In the claim 1 of APA and Herpel above, APA also teaches wherein decoding the MPEG-4 resources includes an action selected from the

group including enhancing audio data in the MPEG-2 TS, enhancing video data in the MPEG-2 TS; (see APA page 12-17), and using the systems data to establish an interactive audiovisual scene (MPEG-4 provides better compression efficiency than MPEG-2 and new features such as audiovisual interactivities and communication link.

(See page 1 line 18 – page 2 line 10).

Regarding to claims 14, 36: Claims 14, 36 are rejected under the same rational set forth above to claim 11.

Regarding to claim 26: Claim 26 is rejected under the same rational set forth above to claim 1.

Regarding to claim 27: Claim 27 is rejected under the same rational set forth above to claim 2.

Regarding to claim 28: Claim 28 is rejected under the same rational set forth above to claim 3.

Regarding to claim 34: The system of claim 28, APA teaches wherein the address access unit (ES_ID or URL) receives a first MPEG-2 TS (ES_ID 1) and a second MPEG-2 TS (ES_ID 2), retrieves a lid URI in the first MPEG-2 TS, (FIG. 1, See page 5, line 13 to page 6 line 2). However, APA fails to teach using the lid URI to retrieve MPEG-4 resources (BIFS) from the second MPEG-2 TS .

Herpel, the same endeavor, teaches encapsulating MPEG-4 resource (BIFS) from the second MPEG-2 TS by using the lid URL (Section II-D page 318 and Section

IV: page 320-323 line 9; FIGs. 4-8). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the transport of Elementary Stream as taught by Herpel in the teaching of APA; in order to encapsulate MPEG-4 streams in MPEG-2 Transport stream.

Regarding to claim 35: Claims 35 is rejected under the same rational set forth above to claim 10.

11. Claims **4-8, 12-13, 29-31, 37-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Herpel; in view of European Patent Application No. EP 1045564 A1 published by WAKI et al..

Regarding to claim 4: APA and Herpel teach the method of claim 3 wherein receiving an MPEG-2 TS embedded with Moving Picture Coding Expert Group 4 (MPEG-4) resources. However, APA and Herpel explicitly do not teach receiving an MPEG-2 TS with MPEG-4 resources organized in Object Carousel (OC) system.

Waki, the same endeavor, teaches receiving an MPEG-2 TS with MPEG-4 resources organized in Object Carousel (OC) system. (see FIG. 34 and ¶0031-¶0042). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel reception apparatus structure as taught by Waki into the method of APA and Herpel, in order to receives the files having directory structures according to the Object Carousel system.

Regarding to claims 5, 6: APA and Herpel teach the method of claim 4 wherein receiving an MPEG-2 TS with MPEG-4 resources and a lid URI embedded in an Initial

Object Descriptor (IOD) to locate resources in the Object Carousel selected from the group including a BIFS scene description stream and an object descriptor stream (see APA , page 4 line 5-page 6 line 7). However, APA and Herpel fail to teach in Object Carousel system includes using an Object Carousel transport protocol; wherein using lid URIs to provide a binding name and access scheme to the objects in the Object Carousel.

Waki, the same endeavor, teaches in Object Carousel system includes using an Object Carousel transport protocol; wherein using lid URIs to provide a binding name and access scheme to the objects in the OC (Figs. 4, 5, 21, 22, 28, ¶0132, ¶0136 to ¶0141). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transmission method as taught by Waki into the method of APA and Herpel, in order to provide a binding name and access scheme to the objects in the Object Carousel .

Regarding to claims 7, 8: In the method of claim 5 above, Waki also teaches wherein using an Object Carousel transport protocol (¶0008 - ¶0010) includes forming a hierarchical directory structure including a root directory, sub-directories, files, and streams.(FIGs. 28, 29 and ¶0013, ¶0023-¶0045).

Regarding to claims 12 and 13: Claims 12, 13 are rejected under the same rational set forth above to claims 7 and 8.

Regarding to claim 29: Claims 29 is rejected under the same rational set forth above to claim 4.

Regarding to claims 30 and 31: Claims 30, 31 are rejected under the same rational set forth above to claims 5, 6.

Regarding to claims 37, 38: The system of APA and Herpel in claim 30 wherein the address access unit uses lid URIs to retrieve MPEG-4 resources (a URL pointer, see Herpel , section II-A: OD components, page 316-317 line 11 and FIGs. 3-4 and section IV: Transport of ES page 320- 322, FIGs 7-8). However, APA and Herpel fail to teach a cache mechanism for storing the OC hierarchical directory.

The same endeavor, Waki discloses an apparatus comprising: a cache mechanism for storing (the data reception apparatus receives a file system having a directory structure) the OC hierarchical directory (§¶0010, §¶0031 to §¶0042, §¶0046 and FIG. 34).

It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine a data reception apparatus as taught by Waki into the method of APA and Herpel, in order to store data files in the Object Carousel directory structure.

12. Claim **39** is rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Herpel; in view of US Pub. No. 2002/0124263 A1 (hereafter US'263) published by Yokomizo.

Regarding to claim 39: APA and Herpel disclose the system of claim 35 further comprising: an interactive audiovisual scene and communication link (see APA page 1 line 18 –page 2 line 10), but APA and Herpel fail to disclose a transmitter having an

interface to send MPEG-4 information, including the transmitter and receiver, formed in response to decoding MPEG-4 systems data, sending and receiving MPEG-4 information.

In the same field, Yokomizo teaches the Interactive Digital TV communication link (FIG. 1) wherein the iSTB (4 of Fig. 1) includes the transmitter (107 of FIG. 8A) for transmitting MPEG-4 BIFS along with MPEG-2 transport stream and a receiver structure in FIG. 9A in order to receive MPEG-2 (containing MPEG-4 streams) digital broadcast signal and decode MPEG-4 systems data in MPEG-4 decoder (207 of FIG. 9A)(see FIGs. 1, 8A, 9A and ¶0030-¶0034, ¶0115, ¶0119, ¶0120). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine Yokomozo's IDTV communication link system in the teaching of APA; in order to develop a means for carriage of MPEG-4 streams in the MPEG-2 Transport Stream at input source and decoding means for detecting a MPEG-4 interactive audiovisual scene in communication link.

13. Claims **15, 24 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over APA ; in view of US Pub. No. 2002/0124263 A1 (hereafter US'263) published by Yokomizo.

Regarding to claim 15: APA teaches an uniform resource identifier (URI) pointer method for playing MPEG-4 data in an MPEG-2 transport stream (TS), the method comprises generating a URI for MPEG-4 resources located at an address;

embedding the URI in an MPEG-2 TS (APA, page 4 line 5 to page 6 line 2); but APA explicitly does not teach broadcasting pointers to MPEG-4 data in an MPEG-2 transport stream (TS), broadcasting the MPEG-2 TS.

However, Yokomizo, in the interactive DTV broadcast system, discloses the uniform resource locator (URL) pointer method for transmitting MPEG-4 data in an MPEG-2 transport stream (TS) in broadcast MPEG-2 TS. (FIG. 1, ¶¶0030-¶¶0034). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine Yokomizo's MPEG-4 broadcasting method in the teaching of APA; in order to develop a means for broadcasting MPEG-4 streams in the MPEG-2 Transport Stream.

Regarding to claim 24: APA and Yokomizo teach the retrieving MPEG-4 resources in response to accessing the address as claim 15 above; APA also teaches MPEG-4 content including audio, video, and systems data. (MPEG-4 contents consist of an initial object descriptor and a variable number of streams, such as object descriptor stream, scene description streams, audio streams, video streams, IPMP streams, etc. see APA, page 2 lines 13-16).

Regarding to claim 25: APA and Yokomizo teach the retrieving MPEG-4 resources in claim 15 above, APA also teaches wherein decoding the MPEG-4 resources includes an action selected from the group including enhancing audio data in the MPEG-2 TS, enhancing video data in the MPEG-2 TS ; (see page 1 lines 12-17), and using the systems data to establish an interactive audiovisual scene (MPEG-4

provides better compression efficiency than MPEG-2 and new features such as audiovisual interactivities; see page 1, lines 18-27), and communication link (page 2 lines 1-10).

14. Claims **16-17 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Yokomizo; in view of Herpel

Regarding to claim 16: APA and Yokomizo teach the method in claim 15, but fail to teach wherein generating a URI for accessing the MPEG-4 resources includes generating a URI selected from the group including a local (receiver) cache address, a Web protocol identifier, and a local identifier (lid).

In the same field, Herpel teaches the generating a URI for accessing the MPEG-4 resources includes locating a URI selected from the group including a local cache address, a local identifier (lid) (a URL pointer, see Herpel , section II-A: OD components, page 316-317 line 11, and section II-D page 318, FIGs. 3-4) and a Web protocol identifier (a HTTP or Internet protocol)(see Herpel, Section IV-D and V; page 322-324 line 22). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine a local (receiver) cache address, a Web protocol identifier, and a local identifier (lid) as taught by Herpel in the teaching of APA and Yokomizo; in order to access MPEG-4 streams in MPEG-2 Transport stream by the lid URL.

Regarding to claim 17: the method of claim 16, APA and Yokomizo explicitly do not teach embedding MPEG-4 resources in the MPEG-2 TS ; and wherein

generating a URI for accessing the MPEG-4 resources includes using a lid URI for accessing the MPEG-4 resources in the MPEG-2 TS.

However, Herpel further teaches embedding MPEG-4 resources in the MPEG-2 TS ; and wherein generating a URI for accessing the MPEG-4 resources includes using a lid URI for accessing the MPEG-4 resources in the MPEG-2 TS (Section V: Accessing MPEG-4 Content page 323-324 line 22). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the method of access MPEG-4 content as taught by Herpel in the teaching of APA and Yokomizo; in order to gain access to MPEG-4 content from relevant transport layers.

Regarding to claim 23: In the method of claim 17 above, APA teaches wherein embedding the URI in an MPEG-2 TS (ES_ID or URL) includes locating a lid URI in a first MPEG-2 TS (ES_ID 1); wherein embedding MPEG-4 resources (BIFS ES_Descriptor contains ES_ID) in the MPEG-2 TS includes embedding MPEG-4 resources in a second MPEG-2 TS (ES_ID 2)(see APA: FIG. 1 , page 1 line 18 to page 6 line 2); however, APA explicitly does not teach the broadcasting the MPEG-2 TS includes broadcasting the first and second MPEG-2 TSs.

Herpel, the same endeavor, teaches the broadcasting the MPEG-2 TS wherein embedding MPEG-4 resources (BIFS ES_Descriptor contains ES_ID) in the first and second MPEG-2 TSs (FIGs. 1-5, Section II:A-D page 316 to 319). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was

made to combine a broadcasting MPEG-2 TS with MPEG-4 resources as taught by Herpel in the teaching of APA and Yokomizo; in order to encapsulate MPEG-4 streams in MPEG-2 Transport stream.

15. Claims **18-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Yokomizo, in view of European Patent Application No. EP 1045564 A1 published by WAKI et al..

Regarding to claims 18: The method of claim 17 above, APA and Yokomizo do not explicitly teach wherein embedding the MPEG-4 resources in the MPEG-2 TS includes organizing MPEG-4 resources in an Object Carousel (OC) transport protocol.

Waki, the same endeavor, teaches receiving an MPEG-2 TS with MPEG-4 resources organized in Object Carousel (OC) system.(see FIGs.31-34 and ¶0018-¶0020, ¶0031-¶0042). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object Carousel transport protocol as taught by Waki into the method of APA and Yokomizo, in order to receive the files having directory structures according to the Object Carousel system.

Regarding to claims 19, 20: The method of claim 18, APA and Yokomizo explicitly do not teach wherein using an lid URI for accessing the MPEG-4 resources in the MPEG-2 TS includes using lid URIs to provide a binding name and access scheme to the objects in the OC.

Waki, the same endeavor, teaches in Object Carousel system includes using an Object Carousel transport protocol; wherein using lid URIs to provide a binding name

and access scheme to the objects in the OC (Figs. 4, 5, 21, 22, 28, ¶0132, ¶0136 to ¶0141). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transmission method as taught by Waki into the method of APA and Yokomizo, in order to provide a binding name and access scheme to the objects in the Object Carousel.

Regarding to claims 21, 22: The method of claim 19, APA and Yokomizo explicitly do not teach wherein using an OC transport protocol includes forming a hierarchical directory structure which includes forming a hierarchical directory structure including a root directory, sub-directories, files, and streams.

Waki teaches wherein using an Object Carousel transport protocol (¶0008 - ¶0010) includes forming a hierarchical directory structure including a root directory, sub-directories, files, and streams.(FIGs. 28, 29 and ¶0013, ¶0023-¶0045). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transmission method as taught by Waki into the method of APA and Yokomizo, in order to form a hierarchical directory structure in the carriage of MPEG-4 streams in MPEG-2 transport stream.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims **40-41** are rejected under 35 U.S.C. 102(b) as being anticipated by US Pub. No. 2002/0124263 A1 published by Yokomizo.

Regarding to claim 40: Yokomizo discloses an MPEG-4 broadcaster (system FIG. 8A), a uniform resource identifier (URI) pointer system (General Database contain URL, 106 of FIG. 8A) for supplying an MPEG-2 transport stream (TS) (MPEG-2 encoder, 104 of FIG. 8A) with URIs for accessing MPEG-4 data (program data base 105 of FIG. 8A) the system comprising:

an address pointer unit having an interface to supply an MPEG-2 TS with URIs for accessing MPEG-4 resources (see US'263, FIG. 8A, ¶0115) and,

a transmitter (107 of FIG. 8A) having an interface to accept the MPEG-2 TS from the address pointer unit (designation unit, 103 of FIG. 8A) and to broadcast the MPEG-2 TS (MPEG-2 with BIFS outputs the data via an antenna to satellite. (FIG. 8A and ¶0115).

Regarding to claim 41: Yokomizo also discloses the system of claim 40 wherein the address pointer unit generates a URI (the button, 14 of FIG. 1, is linked to a URL; ¶0033-¶0034) selected from the group including a local (receiver) cache address (a receiver structure, FIG. 9A), a Web protocol identifier (HTTP protocol, ¶0034), and a local identifier (lid)(¶0033).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims **42, 48-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokomizo, in view of US Patent No. 6,377,309 B1 issued to Masamichi Ito et al.(Hereafter Ito)

Regarding to claim 42: Yokomizo discloses the system of claim 41 further comprising the MPEG-2 encoder (104 of FIG. 8A) and the address pointer unit accepts the encoded MPEG-4 resources and generates a lid URI for accessing the MPEG-4 resources in the MPEG-2 TS, but fails to disclose an encoder having an interface to accept MPEG-4 information and to supply encoded MPEG-4 resources.

Ito, the same endeavor, teaches the encoding MPEG-4 process as the system part of MPEG-4(see US'309, FIG. 2 and col. 3 line 64 to col. 4 line 60). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the encoding MPEG-4 process as taught by Ito into the method of Yokomizo, in order to provide the method of reproducing digital TV data from digital TV broadcast.

Regarding to claim 48: In the system of claim 42 above, Ito also discloses wherein the address pointer unit forms a lid URI in a first MPEG-2 TS (PID) and embeds MPEG-4 resources in a second MPEG-2 TS (Objects A,B, C...) and, wherein the

transmitter broadcasts the first and second MPEG-2 TSs (see FIG. 21,col.16 line 64 to col. 17 line33).

Regarding to claim 49: In the system of claim 40, Yokomizo fails to teach wherein the address pointer generates URIs for MPEG-4 resources selected from the group including audio, video, and systems data. (col. 3 line 64 to col. 4 line 28).

Ito, the same endeavor, teaches the MPEG-4 resources selected from the group including audio, video, and systems data. (col. 3 line 64 to col. 4 line 28). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the MPEG-4 layer standard as taught by Ito into the method of Yokomizo, in order to distinguish difference of MPEG-4 and MPEG-2 structures.

Regarding to claim 50: Yokomizo discloses systems data for the establishment of an interactive audiovisual scene and communication link in claim 40 above (FIG. 1, ¶0030-¶0034), but Yokomizo explicitly fails to teach wherein the address pointer unit generates URIs for MPEG-4 resources selected from the group including enhanced audio data in the MPEG-2 TS, enhanced video data in the MPEG-2 TS.

Ito, the same endeavor, teaches the Object Coding method (col. 4 line 29 to col. 5 line12); including enhanced MPEG-4 audio data in the MPEG-2 TS and enhanced MPEG-4 video data in the MPEG-2 TS (see FIGs 20, 21 col. 16 line 47 to col. 17 line 33). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object Coding method as taught

by Ito into the method of Yokomizo, in order to provide the method of reproducing digital TV data from digital TV broadcast.

20. Claims **43-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokomizo, in view of European Patent Application No. EP 1045564 A1 published by WAKI et al..

Regarding to claim 43: Yokomizo discloses the system of claim 42, but explicitly does not teach wherein the address pointer unit organizes MPEG-4 resources in the MPEG-2 TS using an Object Carousel (OC) transport protocol.

Waki, the same endeavor, teaches transporting an MPEG-2 TS with MPEG-4 resources organized in Object Carousel (OC) system.(see FIG. 34 and ¶0031-¶0042). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transmission apparatus structure as taught by Waki into the method of Yokomizo, in order to transmit the system files having directory structures according to the Object Carousel system.

Regarding to claim 44: In the system of claim 43, Waki further discloses using an Object Carousel transport protocol; wherein using lid URIs to provide a binding name and access scheme to the objects in the OC (Figs. 4, 5, 21, 22, 28, ¶0132, ¶0136 to ¶0141). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transmission method as taught by Waki into the method of Yokomizo, in order to provide a binding name and access scheme to the objects in the Object Carousel.

Regarding to claim 45: In the system of claim 44, Waki further discloses wherein the address pointer unit uses a lid URI embedded in an Initial Object Descriptor (IOD) to locate resources in the OC selected from the group including a BIFS scene description stream and an object descriptor stream (§§0006-§§0042).

Regarding to claims 46, 47: The method of claim 44 above, Waki also teaches wherein the address pointer unit forms an OC system and OC transport protocol (§§0008-§§0010) hierarchical directory structure including a root directory, sub-directories, files, and streams (FIGs. 28, 29 and §§0013, §§0023-§§0045). It would have been obvious to one of ordinary skill in the art at the time the invention of the application was made to combine the Object carousel transport protocol as taught by Waki into the method of Yokomizo, in order to provide hierarchical directory structure in the Object Carousel transmission method.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571) 270-5091. The examiner can normally be reached on Mon.-Thurs., 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis Chow can be reached on (571) 272-7767. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4126

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALAN LUONG/

Examiner, Art Unit 4126

/Dennis-Doon Chow/

Supervisory Patent Examiner, Art Unit 4126